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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,139	07/12/2006	Scott David Keniston	50002/40625	6558
57726	7590	11/24/2010		
MILLER, MATTIAS & HULL		EXAMINER		
ONE NORTH FRANKLIN STREET		HUTCHINS, CATHLEEN R		
SUITE 2350		ART UNIT	PAPER NUMBER	
CHICAGO, IL 60606		3672		
NOTIFICATION DATE	DELIVERY MODE			
11/24/2010	ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

kdas@MILLERMATTHIASSHULL.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/597,139	<b>Applicant(s)</b> KENISTON ET AL.
	<b>Examiner</b> CATHLEEN R. HUTCHINS	<b>Art Unit</b> 3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 October 2010.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-3 and 5-9 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3 and 5-9 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 18 May 2009 is/are: a) accepted or b) objected to by the Examiner.  
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
   Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
   Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: there is no antecedent basis for "each drill rod". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The preamble of claim 5 recites an apparatus, for which the method steps recited in claim 5 do not further limit, since a method of using a tool does not further limit the apparatus itself.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman US4329647 in view of Bennett, et al. US3047794.

Freedman teaches an apparatus (Figure 1) for/capable of surveying drill holes using the method steps of feeding a survey tool P\_1-P\_n into a borehole, activating the tool once drilling is completed, and taking position readings from the survey tool as withdrawal Column 5: 21-25 of the drill string, wherein claim 18 in column 8: 10-12 teaches that the surveying may be obtained during drilling; the survey tool includes inertial survey package column 5: 26-30 (wherein directional surveying requires inertial survey equipment), inherently has a power source, inherently has a data logger (having a computer as described in column 11: 34-40), and a damping system (which is the drill string that the survey tool is mounted on) to isolate from vibrations, particularly when in a sleep mode.

Freedman teaches a method of taking surveys at different intervals P\_1-P\_n, to determine direction and trajectory, which inherently require an inertial survey package.

Freedman is silent as to whether the survey tool is held on the end of a drill string, but does not teach maintaining the survey tool in sleep mode during drilling, and then sensing when drilling has been stopped to activate the survey tool.

Bennett, et al. teaches using a borehole logging apparatus with a drill bit 5 to take measurements while the drill string is being withdrawn Column 5: 11-16, where the drill string withdrawal may be halted to remove drill string sections column 5: 20-25, for which measurements may be taken at this time.

Since Freedman teaches taking surveys at known distance intervals, it can be interpreted that Freedman also teaches taking surveys during the exchange of drill rods. However, Freedman is silent as to the exchange of drill rods, and it can be argued that it would be obvious to take measurements during removal of drill rods, since the surveys are taken at fixed distance intervals, which can be chosen to correspond to the intervals of drill rod lengths, such that the measurements will be taken at least when the drill string has been halted for removing each drill rod. This would provide stationary measurements, which can be interpolated, as described by Freedman in column 11: 34-40.

It would have been obvious to a person having ordinary skill in the art to modify Freedman in view of Bennett, et al. to take measurements when withdrawing the drill string, and sensing when the drill string has halted to take wellbore measurements at fixed intervals while individual drill stem lengths are removed, as an alternative means of taking borehole measurements along the length of the borehole.

***Response to Arguments***

Applicant's arguments, see remarks, filed 10/1/2010, with respect to the rejection(s) of claim(s) 1-3 and 5-9 under Freedman in view of Anghern have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bennett, et al.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). The amendments to the claims necessitated the new grounds of rejection.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHLEEN R. HUTCHINS whose telephone number is (571)270-3651. The examiner can normally be reached on Mon thru Thurs 7:30-5, alternate Fri 7:30-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenneth Thompson/  
Primary Examiner, Art Unit 3672

/CRH/  
11/16/2010